

Toward a Policy-Relevant Psychology of Avoiding Nuclear War

Lessons for Psychologists From the Cuban Missile Crisis

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ABSTRACT: A virtually paradigmatic psychological response to the risk of nuclear war has begun to emerge: nuclear depth psychology. The goal of nuclear depth psychologists is to reverse the arms race by healing what they take to be a deeply pathological superpower relationship. This approach is criticized as implausible historically, because even the most opportune moment for fundamental change in the relationship between the United States and Soviet Union (immediately following the Cuban missile crisis) failed to produce such a change. It is also argued that this and subsequent failures to fundamentally alter the superpower relationship are due to the persistence of conflicting values and of pervasive ambiguities faced by policymakers charged with managing nuclear risks. It is apparent, therefore, that a policy-relevant psychology of avoiding nuclear war must begin where nuclear policymakers begin: by focusing on (salient psychological aspects of) the prevention and management of nuclear crises.

Mr. President, this is a . . . serious development . . . I do think we have to set in motion a chain of events that will eliminate this [missile] base. I don't think we can sit still.

—Dean Rusk, in an EXCOMM meeting during the Cuban missile crisis, October 16, 1962; quoted in Trachtenberg, 1985b, p. 171

What happens beyond that? You go in there with a surprise attack. You put out all the missiles. This isn't the *end*. This is the *beginning*, I think.

—George Ball, in an EXCOMM meeting during the Cuban missile crisis, October 16, 1962; quoted in Trachtenberg, 1985b, p. 194

We ought somehow to get . . . an absolutely concrete study, to be carried on by using historical and biographical material mainly . . . a program of concrete individual psychology, at which anyone in some measure may work. It is replete with interesting facts, and points to practical issues superior in importance to anything we know.

—William James, 1907, p. 19

We are presently in the midst of an unprecedented groundswell of interest among psychologists in issues relating to nuclear policy and nuclear war. The signs are everywhere apparent: Articles and books are being written, organizations founded, conferences held, and courses taught at an astonishing rate (Klineberg, 1984). Former

American Psychological Association (APA) president Brewster Smith's remarks to a 1982 symposium on psychology and peace epitomize the way in which most psychologists seem to have found their way to a professional interest in nuclear policy, a subject in which they could hardly have specialized, or even encountered, in their professional training. Smith announced:

I have become convinced, especially since the advent of the Reagan Administration, of the utterly pre-emptive human importance of preventing a nuclear holocaust. I have seen the light! No other issue can take priority . . . I have been converted. (Smith, 1982, cited in Klineberg, 1984, p. 1248)

In short, many psychologists have concluded, with Smith, that the policies of the present administration are driving the risk of nuclear war dangerously high and that these policies are but a more bellicose and aggressive version of longstanding trends in nuclear policy. For these reasons, many psychologists have dropped what they were doing in order to seek a uniquely psychological contribution to reducing the risk of nuclear war.

Despite the infancy of the emerging subdiscipline of the psychology of avoiding nuclear war, a virtually paradigmatic psychological response to problems of nuclear risk has already emerged. To the majority of psychologists (and psychiatrists) who have begun to grapple with these questions, the problem has both a relatively superficial and a deeper aspect. Superficially, the key causative agent held to be driving the risk of nuclear war upward is the *arms race*, often referred to as the "crazy" or "insane" arms race. At a deeper level, however, the problem appears to most psychologists to be a *pathological superpower relationship*—defective patterns of interaction that provide, as it were, the psychological fuel for the arms race. These are the essential ingredients of what is hereafter referred to as *nuclear depth psychology*.

As we shall see, nuclear depth psychology is not to be equated merely with psychoanalytic psychology and its contemporary derivatives. It is rather an attitude or approach to the problems of nuclear risks that cuts across nearly all psychological schools and that asserts that risk of nuclear war is being driven steadily upward by deep psychological causes—embodied mainly in defective patterns of interaction between the United States and the Soviet Union.

Predictably, clinicians among the nuclear depth psychologists tend to view the U.S.-Soviet relationship as psychopathological, whereas the experimentalists are inclined to hold that, based on scientifically derived data gathered from quarters other than international politics, the relationship is defective and likely to produce upward movement in a spiral of nuclear risk. I will argue here that these differences between the clinical and experimental formulations of nuclear depth psychology are neither as large nor as important as the much greater conceptual divide that separates the views of both groups from the policymaker's typical understanding of the requirements for managing and reducing the risk of nuclear war. Metaphorically, the present situation is something like an exemplification of Whorf's (1956) hypothesis: Nuclear depth psychologists of all persuasions, on the one hand, and nuclear policymakers and analysts on the other, speak different languages of nuclear risk, with the psychologists holding that the forces that drive risk of nuclear war upward are "deeper" than, or beyond, the awareness of policymakers. The respective psychological realities of psychologists and policymakers are thus very different, and this has led to the central dilemma of nuclear depth psychology: It is ignored almost universally in the policy community at just the time when interest in nuclear issues among psychologists is greater than it has ever been. Why this should be so and what ought to be done about it constitute the leading questions of this essay.

Summary of the Argument: The Nuclear Depth Psychologists' Fallacy and What to Do About It

Let us begin with the policy-relevant question: What is to be done about the problem thus formulated by nuclear depth psychologists—a deeply pathological superpower relationship, which drives an arms race, which, in turn, drives the risk of nuclear war ever higher? There has been no shortage of solutions. Indeed, the recent great and general awakening among psychologists to the prospect of a major nuclear war has sparked an unprecedented, creative explosion of "solutions." Yet many of these are difficult to take seriously, because they are either impossibly ambitious or pitifully inconsequential. Among those least likely to succeed are a call for what amounts to a worldwide political revolution (Kovel, 1983), a worldwide transformation in our patterns of behavior (Skinner, 1982), or the initiating of meetings between American and Soviet psychologists (Klineberg, 1984). It is not that

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such proposals are necessarily or intrinsically bad. The point is that either the probability of their occurrence is so low or the probability of their having any noticeable effect on U.S.-Soviet nuclear policy is so vanishingly small, that they cannot begin to satisfy the members of a group like the nuclear depth psychologists, who seem universally to believe that risk of nuclear war is much too high at present and is rising fast. The point has been made poignantly by Wagner (1985). In a useful, critical review of psychological approaches to reducing the risk of nuclear war, he admitted that the solutions put forward are too often "overwhelming and paralyzing" (p. 533). "Where we go," he said, ". . . is unclear" (p. 533). And so it is.

But the policy irrelevance of depth psychological solutions to the problem of nuclear risk is not restricted only to those that seem obviously extravagant or ineffectual. It applies also to psychological solutions that are widely regarded in the psychological community as having great potential policy relevance, due in part to their having been substantiated by a good deal of empirical research and in part to the *apparent* complementarity between psychologists' approaches to the problem and those of nuclear policymakers. The following example is meant to illustrate the point (argued at length below) that even the best and brightest psychological solutions to the problem of nuclear risk are remarkably beside the policymaker's point and thus quite unlikely to affect the policy-making process.

Probably the best known and most highly regarded attempt (among psychologists) to grapple psychologically with risk of nuclear war is Charles E. Osgood's (1962) "Graduated and Reciprocated Initiatives in Tension Reduction," or GRIT. It is in many ways the *locus classicus* of nonclinical nuclear depth psychology. According to Osgood, the key problem is the arms race, which at the psychological level is exemplified in a spiral of mutual mistrust, which in turn leads in his view to tension and fear, which, finally, leads to further steps in the arms race. And it is the arms race itself, in Osgood's view, that continually raises the risk of nuclear war. Here, in sum, is Osgood's assessment, solution, and evaluation of the probability of successfully reversing the arms race with GRIT:

An arms race is obviously a *tension-increasing* system; it is a spiral of terror. By reversing one of the characteristics of an arms race, we may be able to transform it into a spiral of trust. This would be a graduated and reciprocated unilaterally initiated, internation system that was *tension-decreasing* in nature [GRIT] . . . with anything like the energy now being thrown into the arms race, GRIT would be feasible. (Osgood, 1986, p. 196)

Worked out in fine-grained detail by Osgood and many others, GRIT has become the solid core of received wisdom for psychologists who, working now a quarter century after the publication of Osgood's *An Alternative to War or Surrender*, seek to bring their professional knowledge directly to bear on the risk of nuclear war.

What, then, is fallacious in Osgood's assumption

that GRIT is "feasible"? Why, after nearly 25 years, does GRIT (and its many successors) still strike those few members of the nuclear policy community who have studied it as unreal and irrelevant? An answer to this critical question may be approached in a more exact manner by comparing Osgood's rationale for GRIT with the following summary statement of the central goal of nuclear strategy: deterrence by means of crisis stability. Thomas C. Schelling, writing at almost the same time as Osgood, specified more clearly than anyone else, and probably more influentially, the policymaker's conceptual ground rules for the maintenance of nuclear deterrence.

It is widely accepted that the United States has the military power virtually to obliterate the USSR, and vice versa. . . . But . . . we are worried about whether a surprise attack might have such prospects of *destroying the power to retaliate* as to be undeterred itself by the threat of retaliation. . . . There is a difference between a balance of terror in which either side can obliterate the other and one in which both sides can do it, no matter who strikes first. It is not the "balance"—the sheer equality or symmetry in the situation—that constitutes nuclear deterrence; it is the *stability* of the balance. The balance is stable only when neither, in striking first, can destroy the other's ability to strike back. (Schelling, 1960, p. 232)

To Schelling, as to entire generations of nuclear strategists, nuclear war is prevented by means of deterrence, which is a function of the credibility and "audibility" of threats that, finally, are computed mainly on the basis of a net assessment of the relative capabilities and vulnerability of warheads, delivery vehicles, and command and control systems. No one—certainly not Schelling—would claim that these principles have always guided our nuclear policy in practice (Schelling, 1985/1986). But almost all nuclear policymakers have argued over the years that Schelling's principles of strategic stability ought to have guided their decisions, in principle.

What needs to be noticed first and appreciated about these formulations of Osgood and Schelling is how utterly incommensurable they are with respect to the determinants of risk of nuclear war. Using a method one might call *fear assessment*, Osgood attributed the rising risk of war to deep fear and tension caused by continued participation in the arms race. To Schelling, however, risk of war has little to do with any hypothetical psychological strain and everything to do with coming off second best in a net *threat assessment*. To characterize the conceptual gulf between them in its steepest form, Osgood (and most psychologists) believe that any nuclear war will likely be *caused* by threats, whereas Schelling (and most policymakers and analysts) believe it will be *prevented* by them. No wonder that GRIT, a pillar of received wisdom among psychologists, is regarded as a curiosity among policymakers.

It is important to notice, finally, why GRIT and its descendants are so wide of the mark of policy relevance. It is because they represent a "depth" psychology, an attempt at psychological unveiling of processes that are deeper than the conscious experience of nuclear policymakers. The implicit claim is that efforts to deter nuclear

war by the maintenance of strategic stability, which seems to policymakers to be the cornerstone of war prevention, are "really" the very opposite—they are the likely cause of nuclear war. Psychologists tend to see this as a tale of two zeitgeists, one superficial and false (the policymakers') and one deep and true (the psychologists'). Obviously policymakers have had none of this. They are in fact much more likely to echo the remark of the Viennese journalist Karl Kraus, who described the original depth psychology this way: "Psychoanalysis is that spiritual disease of which it considers itself to be the cure" (cited in Janik & Toulmin, 1973, p. 75). The lack of seriousness with which nuclear policymakers have viewed schemes like GRIT seems to prove the point rather conclusively.

This point cannot be emphasized too much; its unravelling represents the critical thrust of this article: *Nuclear depth psychology does not lead to policy-relevant conclusions*. It is a conceptual cul-de-sac within which psychologists are likely to remain endlessly trapped, without a reasonable hope of contributing to the reduction of nuclear risks, the fear of which drove them into the nuclear arena in the first place. If psychologists seek a realistic hope of influencing nuclear policy, they must, as I argue in the last two sections, begin again after they have divested themselves of their spurious nuclear depth psychology.

The nub of their central error was captured many years ago by William James. He called it, on one occasion, "the psychologists' fallacy *par excellence*," which consists in "confusion of his own standpoint with that of the mental fact about which he is making his report" (James, 1890, Vol. 1, p. 196). "We must," cautioned James, "be very careful, therefore, in discussing a state of mind from the psychologists' point of view, to avoid foisting into its own ken matters that are only there for ours" (James, 1890, Vol. 1, p. 197). But this is precisely what nuclear depth psychologists have *not* done. In Jamesian terms (James, 1890, Vol. 1, pp. 221–223), our nuclear policymakers are well *acquainted* with the fear of crises leading potentially to nuclear war, and thus they spend much of their time thinking *about* the determinants of strategic stability in such a way as to try to drive downward the probability that deterrence will fail. This, schematically, is the psychological reality of the nuclear policymakers. It bears no resemblance whatever to the "reality" that nuclear depth psychologists seek to attribute to them: Acquaintance with pathological suspicion and attention to arms "racing," each of which is ultimately attributable to superpower psychopathology. This, finally, is responsible for the policy irrelevance of the whole approach: Its premises are totally alien, psychologically completely unreal, to those who actually manage the nuclear risks.

In an 1899 essay, James generalized this problem of egocentric psychology by calling it "a certain blindness in human beings" that leads to the "injustice of our opinions, so far as they deal with the significance of alien lives" (James, 1899/1977a, pp. 629–630). His remedy was tolerance, based on a radically empirical approach to human knowledge. The more we understand what the

lives of others are really like, from the inside, the more likely we are, James believed, to formulate a problem in a way that is appropriate to its context and thus pertinent to plausible solutions. This essay is conceived as just such a Jamesian exercise—in nuclear radical empiricism—of clearing away some of the fallacious depth-psychological assumptions that are leading nowhere.

It is also, finally, an attempt to respond to the provocative challenge issued recently by Morawski and Goldstein (1985) to develop a policy-relevant psychology of avoiding nuclear war by engaging in “blunt honesty about the influence of politics, the constraints of methodology, and the risks of expertise” (p. 283). My belief is that if we psychologists are honest with ourselves, if we begin to acknowledge the hard reality of political variables, if we try to face up to the limitations of the analogy between world politics and the consulting room or laboratory, and if we begin to face the fact that nuclear policymakers are almost oblivious to psychology as such, then we will want to chart a new course, one that will begin with phenomenological analyses of nuclear crises (Blight, 1985a, *in press-a*, *in press-b*). If we thus try to enter the “alien lives” of those who manage the nuclear risks under which we all must live, we may indeed begin to assist them in lowering the likelihood of a catastrophic nuclear war.

Nuclear Depth Psychology: An Outline of the Emerging Paradigm

It is instructive to begin simply by scanning a short list of some of the more eminent statements of adherence to paradigmatic nuclear depth psychology. Neo-Freudians put the problem variously as “social madness” (Lifton & Falk, 1982, p. 18), “collective psychopathology” (Mack, 1985a, p. 291), “social psychosis” (Mack, 1985b, p. 53), “paranoid madness” (Kovel, 1983, p. 84), “exhibitionistic drunken gesturing of two suicidal giants” (Menninger, 1983, p. 350), and “group suicidal fantasies” (Coleman, 1984, p. 124). From psychologists who approach nuclear questions from a (more or less) cognitive/social perspective, we learn that the problem is a “malignant social process” (Deutsch, 1983, p. 23), an arms race that is “certifiably pathological” (Holt, 1984, p. 212), and “madness” associated with a “hate-filled diabolical enemy image” (White, 1984, pp. ix, 134). From within the humanistic orientation, the risk of nuclear war appears to be a function of a “terrible insanity” (Rogers, 1982, p. 7), “crazy behavior” signifying “preparation for species suicide” (Kull, 1984, pp. 64, 65), and “insane, illogical and divorced from reality” (Chilstrom, 1984, pp. 43–46). And although behaviorists characteristically tend to eschew speculation about what psychologists of other persuasions regard as the deepest levels of superpower psychopathology, many who have become interested in nuclear policy agree with their colleagues about the visible face of the problem. According to Nevin (1985), for example, “the arms race *is* the problem,” and it is against the momentum of this race that Skinner (1982) has urged

us to begin “acting to save the world.” One cannot help but notice that this litany of nuclear diagnoses (which could be greatly expanded) is as remarkable for the theoretical diversity of its authors as for the virtual unanimity of their variously expressed opinions. It appears that in the face of what is held by many psychologists to be the rising threat of nuclear war, the infamous tendency of psychology toward parochial splintering and cacophonous incoherence has vanished almost entirely.

It is important to understand at the outset what most psychologists and psychiatrists appear to mean by such phrases as “collective psychopathology of the nuclear arms competition” (Mack, 1985a, p. 291). With regard to the *sort* of psychopathology held to be driving “the crazy arms race” (Deutsch, 1983, p. 23), Robert Holt has provided the necessary distinction,

The thinking involved is not crazy, but . . . the arms race does have certifiably pathological features, corresponding on the level of the world system to the conditions treated by family therapists on the level of family systems, but it is a pathology primarily of communicative and interactional patterns, not of cognition. (Holt, 1984, pp. 211–212)

Nuclear policymakers in the United States and Soviet Union are thus not taken to be irrational individuals, but rather (more or less) rational people trapped in an irrational system of relating internationally, in the sense that (as nuclear depth psychologists see it) the goal toward which the policymakers strive—reducing the risk of nuclear war—is inconsistent with the probable catastrophic result of the warlike posture the crazy international system forces them to take.

Many nuclear depth psychologists trace their intellectual lineage to Einstein, who said that “a new type of thinking is essential if mankind is to survive” (quoted in Holt, 1984, p. 200). The psychologists, in short, have tried to make Einstein’s formulation their own: What is therefore needed, they argue, is not more rational thinking, but more *global* thinking if we are to escape the nuclear age with our lives and cultures intact.

The nuclear depth psychologists’ view of our nuclear predicament is thus stark and bleak. As they see it, the superpowers are engaged in a suicidal arms race, each side threatening the other with ever more usable and threatening weapons of mass destruction. It is widely believed in the psychological and psychiatric communities that this arms race, run ostensibly to maintain national security, will instead ultimately have exactly the opposite result: Sooner or later, one side or the other (or both), driven to distraction by crescendoing nuclear terror and threats, will feel compelled to launch some or all of its nuclear arsenal, resulting in the destruction of both societies, perhaps even of all societies.

The nuclear depth psychologists’ claim to competence in their extrapolations into the nuclear future rests ultimately on the credibility that is attributed to an analogy: that between what Holt calls “the pathologies of communicative and interactional patterns” occurring within families and other small, face-to-face groups of

individuals with which psychologists and psychiatrists are professionally acquainted, and the pathological process that they believe accurately characterizes the quality of the superpower relationship. Following are statements of the problem from two of the most eminent nuclear depth psychologists; each is based on the presumed validity of an analogy between a certain sort of interactional pathology and the pathology said to be driving the superpowers inexorably toward Armageddon. The first is from psychiatrist John Mack; the second is from social psychologist Morton Deutsch.

The nuclear weapons competition actually is insane, or to use the more modern term, psychotic, in some deep, formal or literal sense. . . . In the case of the nuclear arms race, it is not individuals who are psychotic. Rather, the madness resides in *collective* patterns of thinking and relationships that are poorly adapted to the requirements of planetary survival in the nuclear age. (Mack, 1985b, p. 53)

The United States and the Soviet Union are trapped in a malignant social process giving rise to a web of interactions and defensive maneuvers, which, instead of improving their situations, make them both feel less secure, more vulnerable, and burdened, and a threat to one another and to the world at large. (Deutsch, 1983, p. 21)

These two leading nuclear depth psychologists hold that the leaders of the superpowers, although not crazy people, are unwitting participants in a *crazy process*. According to this view, our leaders may indeed consciously strive for nuclear peace, even as they move us ever closer to nuclear war.

What, then, is to be done about this worsening situation, characterized by the frantic, bipolar pursuit of peace and security but by a means—arms racing—that is believed to lead inexorably to war and catastrophe? How is the peaceful alternative future to be secured? For nuclear depth psychologists, the analogue to small-group pathology provides the answer. Once again, psychiatrist Mack and psychologist Deutsch speak to the issue.

The cure for our nuclear psychosis will grow out of a process of political maturation analogous in some ways to what therapists seek to achieve in the psychotherapy of individuals and families. . . . The removal of the nuclear danger will require, above all . . . , appreciation of the fact that we and the Soviet Union share a common danger and must together find a way to reduce it. (Mack, 1985b, p. 53)

The first step is to heighten everyone's consciousness of how crazy the process is . . . the old notion of "national security" must be replaced by the new notion of "mutual security" if the superpowers are to break out of this malignant social process. (Deutsch, 1983, p. 24)

This, then, is the depth psychological strategy needed to combat the problem epitomized in Einstein's many remarks to the effect that, in the nuclear age, everything has changed except our thinking: We must learn to think differently about the relationship between the nuclear superpowers if the arms race is to be reversed and nuclear catastrophe avoided.

Reasons for the Past and Present Policy Irrelevance of Nuclear Depth Psychology

The central fact to be faced by advocates of nuclear depth psychology is this: Nuclear policymakers are almost totally uninterested in any advice offered them by psychologists. Remonstrate as we might, in seeking to bring to bear clinical insights and scientific research that we believe to be both paradigmatically true and pragmatically pertinent to nuclear risks, there is no one listening at the policy end of what we hoped would be a conversation. In a recent timely article, Tetlock took note of this "steely resistance" and observed that for policymakers, "the problems for which solutions are being proposed [e.g., Osgood's GRIT] are not widely understood or recognized to be problems" (Tetlock, 1986, p. 560). The discouraging but realistic conclusion Tetlock (1986) drew from this central fact of policymakers' profound disinterest in psychology is that, no matter how relevant or potentially relevant psychologists believe their ideas to be, the prospects for what he calls psychologically based "procedural reform" are practically nil (p. 560). Thus psychology remains functionally irrelevant to the nuclear policy-making process.

We would do well to meditate systematically, if very briefly, on why this should be so: Why, that is, despite the best efforts of many psychologists over the past quarter century or so, does nuclear policy-making remain, as always, almost hermetically sealed off from psychology? Why the "steely resistance" to suggestions derived from nuclear depth psychologists' beliefs that the arms race drives nuclear risk dangerously high and that it exemplifies a pathological relationship between the nuclear superpowers? These are questions with which we ought to begin.

Whenever we confront a system of ideas that, despite assiduous effort, remains impervious to the influence of another such system, we may be fairly sure that we are dealing with fundamental differences between two intellectual communities whose respective members live, to a considerable extent, in different conceptual worlds. The relations between such communities are governed by certain general principles, and no one has spoken more illuminatingly than Thomas S. Kuhn about the ways in which they produce mutual alienation:

Like the choice between competing political institutions, that between competing paradigms proves to be a choice between incompatible modes of community life. Because it has that character, the choice is not and cannot be determined merely by the evaluative procedures characteristic of normal science, for these depend in part upon a particular paradigm, and that paradigm is at issue. When paradigms enter, as they must, into a debate about paradigm choice, their role is necessarily circular. Each group uses its own paradigm to argue in that paradigm's defense. . . . Yet, whatever its force, the status of the circular argument is only that of *persuasion*. It cannot be made logically or even probabilistically compelling for those who refuse to step into the circle. (Kuhn, 1970, p. 94; italics added)

Kuhn, of course, was writing about incommensurable scientific theories. But the conditions he described can

also be applied with profit to that most perplexing question of the nuclear age: Why have we not had a major war since 1945? Members of the policy community are inclined to give credit to deterrence, whereas the nuclear depth psychologists are likely to believe that war has been avoided largely in spite of deterrence. But the policymakers remain unpersuaded. They "refuse to step into the circle" of the psychologists, whose formulations thus remain irrelevant to the risk of nuclear war.

It is useful, even necessary, for nuclear depth psychologists to keep Kuhn's characterizations firmly in mind, particularly when they reflect on what they want to happen: They seek, to whatever extent possible, to transform nuclear policy-making into an applied psychology. Because there are already many sorts of applied psychologies, one may be tempted to believe that the establishment of just one more, devoted to reducing the risk of nuclear war, is not terribly difficult or that, in any case, it is bound to occur merely if sufficient effort is expended. But neither of these can be true if we (correctly) accept Tetlock's proposition that nuclear policy-making and psychology have arrived at an apparently untraversable "conceptual impasse" (Tetlock, 1986, p. 557). For as Kuhn suggested, an impasse as profound as this is unlikely to be resolved merely by piling on more data and theories. Such activity, viewed from the outside (which is where the policymakers are, relative to the psychologists), inevitably looks circular and beside the point. If the policy community is to adopt the position of nuclear depth psychology, if there is to be an applied, *policy-relevant* psychology focused on the arms race and relational pathology, then the view of the policymakers must be forcibly overthrown, which is quite unlikely, or else they must be persuaded that they have been operating all along with the wrong questions and answers.

In order for the latter act of persuasion to occur, at least the following conditions must be met:

1. *Truth.* Theory-based psychological advice must be demonstrably true, relative to its competition.

2. *Belief.* The psychological theories and recommendations must be believed by the policymakers to be true. They must come to regard the nuclear depth psychologists' problems and solutions as their own.

3. *Learning.* The psychological advice must be learned by the policymakers much as it is "taught" by psychologists.

4. *Application.* Psychological principles must be applied properly in those situations and to the extent that they are actually relevant.

5. *Evaluation.* A process must be instituted by which Conditions 1-4 are evaluated, corrected, improved, and thus given increasing credibility.

Obviously, at least four of these five canonical requirements for policy relevance remain unmet. Even optimistic nuclear depth psychologists must admit that the process has stalled between Conditions 1 and 2. The two central principles of nuclear depth psychology—danger of the arms race, underlying relational pathology—are virtually paradigmatic in psychology (and have been since

the publication of Osgood's work in 1962). The push toward policy relevance has been stalled in the same place for nearly 25 years!

What must occur before nuclear policymakers step haltingly into the circle of psychological reasoning, theory, evidence, and recommendations that they presently regard as irrelevant? Although they may at first appear to be trivial difficulties, we should first note several practical but not easily resolved problems that prevent policymakers from learning anything significant about psychology. First, policymakers are normally too busy to become acquainted with, say, political science, let alone psychology. Neustadt and May (1986) were probably correct to assert that "it may be easier to get a million dollars of public money than a minute from a president or cabinet officer" (p. 1). The President receives, for example, one 20-minute briefing per year on the state of all of the sciences in general! Second, as Tetlock (1983, 1986) has emphasized, psychology is thought by policymakers to be too abstract and abstruse to yield useful advice in concrete situations that, though not wholly unprecedented of course, are nevertheless experienced by policymakers as sufficiently novel to warrant a healthy dose of intuition, hunch playing, and so on. Finally, there is the very difficult problem of self-reflexivity: "The decisionmaker who must improve decisionmaking is the very person whose decisionmaking is to be improved" (Kahan et al., 1983, p. 40). It is, in fact, very difficult for most policymakers to see in psychology anything more than a thinly veiled accusation that they are incompetent in ways that, given the opportunity, psychologists could clean up. But nuclear policymakers are quite unlikely to be persuaded of this, principally because they continue to disbelieve that the problems they face are to any significant extent psychological ones.

But these problems, difficult to solve as they undoubtedly are, do not constitute the really recalcitrant core of incommensurability that divides nuclear policy-making from nuclear depth psychology. To illustrate the central reason why nuclear depth psychologists have failed to persuade the policymakers to step into their conceptual circle, let us look briefly at the work of Deutsch, which represents in important respects the best work done so far by psychologists who have, like Smith, "seen the light" and made reducing the risk of nuclear war a very high priority. By engaging in this "best case analysis," and by showing the ways in which Deutsch's work remains outside the policymakers' conceptual circle, we may begin to see the need for a psychological alternative to nuclear depth psychology.

Deutsch's advocacy of the nuclear depth psychology paradigm is complete and enthusiastic—as we have already seen. To him, the arms race is the observable, risk-inducing process to be feared, and a superpower relationship he characterized variously as "crazy," "pathological," and "malignant" is the deeper cause of arms racing (Deutsch, 1983, p. 4). It should be recognized initially that Deutsch is no Johnny-come-lately to the study of conflict, social problems, or seriously deficient rela-

tionships. In fact, his interest in nuclear policy has permitted him to draw on his knowledge of all of these sub-disciplines of psychology and to provide a data-based, theoretically coherent, and powerful explanation of the problem of risk of nuclear war. At its core is Deutsch's "crude law of social relations: The characteristic processes and effects elicited by any given type of social relation tend also to induce that type of social relation" (Deutsch, 1983, p. 7).

In his work with the two-person game paradigm, Deutsch (1973) largely anticipated the recent, more highly publicized work of Axelrod (1984), which shows that (what Deutsch called) "nonpunitive deterrence" is superior as a strategy both to pacifism and the sort of punitive deterrence Deutsch believed governs the superpower relationship (Deutsch, 1973). Nonpunitive deterrence involves both purely proportional and retaliatory actions and also very high reliability. Thus, an individual practicing this strategy can be trusted not to attack first and to respond proportionally in kind. Deutsch found that in the long run, this strategy pays the greatest rewards, and Axelrod (who called the strategy "tit-for-tat") found that it also tends to induce greater cooperation in other players. In other words, a spiral of cooperation can be created and expanded that yields results consistent with "Deutsch's crude law": Trust and cooperation can take hold and prosper even under initial conditions of egotism and anarchy.

Deutsch (1983) argued that the very opposite sort of spiral characterizes U.S.-Soviet relations. Arms racing continues, in his view, because at bottom "the conditions for social order or mutual trust do not exist" (p. 5). Therefore, instead of establishing and expanding a cooperative spiral, we have what Deutsch called a "malignant" spiral in which each side mistrusts the other totally and each deterrent threat by one leads to an escalated threat from the other (see also White, 1984). As if to provide further confirmation of "Deutsch's crude law," mistrust has in the case of the superpowers given rise to mistrust, threat to threat, and fear to fear, and the result is an arms race bringing us ever nearer to holocaust. In this way, and with considerable virtuosity and close attention to the requirements of empirical research, Deutsch has linked nuclear depth psychology with theories and data deriving from one of the most interesting and seminal programs of research in all of social psychology.

Why is it, then, that Deutsch's writing on nuclear policy has had no more impact on the nuclear policy community than the pronouncements of many others, whose views are not nearly as well-grounded in empirical research? Because Deutsch's key paper on nuclear matters only appeared in 1983, the very asking of the question may seem premature, until we recall that Osgood (1959) published a somewhat similar paper well over 25 years ago, also with no noticeable impact on the policy process. It is instructive to note that in addressing this question one must *invent* the policymakers' modal response. None exists, so far as I know, in the policy literature. Policy

analysts have not taken the trouble even to criticize Deutsch and his nuclear depth psychology.

But were they to inform themselves about Deutsch, the hypothetical response of the policy community would probably go something like this: Cooperative and "malignant" spirals, escalating as a function of trust and mistrust, may well apply to the relations between *persons*, but not to those between sovereign *nations*. The most important moral and psychological variables, which either grow or diminish in value and thus come to define the quality of interpersonal relations, have only a very limited role to play in international politics. As a matter of fact, the United States' government does not "trust" the Soviet Union any more or less than it "trusts" Great Britain. We expect each to act, as we intend to act, on the basis of *interests*. We simply have radically different views of the respective interests of each government and thus very different expectations regarding the behavior of each under certain circumstances—say, an attack by unknown terrorists on American citizens.

Thus present attitudes of policymakers would probably echo that of Lord Palmerston, who is said to have proclaimed in the early 19th century that "England has no eternal enemies, only eternal interests" (cited in Stokesbury, 1981, p. 17). And George Kennan has recently made the following general point: "Government is not an agent, not a principal. Its primary obligation is to the *interests* of the national society it represents, not to the moral impulses that individual elements of that society may experience" (Kennan, 1985/1986, p. 206). One must add: nor to the *psychological* impulses either, such as liking, loving, disliking, hating, and all of the emotional strata asserted by nuclear depth psychologists to underlie the nuclear arms race. This is not, however, to claim that these factors do not influence foreign policy decisions. Obviously they do, because human beings make those decisions. But the depth psychological lexicon is not the one in which policymakers think about foreign policy. They think mainly about interests, especially competing interests and the need for trade-offs. Thus policymakers have been inclined to believe that trust and empathy, which must have a good deal to do with *interpersonal* relations, must also have little or nothing to do with *international* relations. Their everyday experience seems to confirm both propositions.

This is why, finally, nuclear policymakers and analysts have made few, if any, significant distinctions over the years between advice deriving from solid behavioral science, like that of Deutsch (or Osgood), and that which may seem to a behavioral scientist to be wild and baseless psychological extrapolation, like that of DeMause (1985). The nuclear policymakers have refused to step into the conceptual circle of nuclear depth psychology. They remain utterly unpersuaded of its value for them. Its principles, no matter how well-documented psychologically, remain psychologically unreal to them. It is impossible to say for certain that this will not change, but one ought to admit that it is unlikely to change. Any psychological approach to nuclear policy that appeals for its explana-

tions to levels "deeper" than the level of experience of typical nuclear policymakers has always been, and is likely to remain, policy irrelevant.

Historical Reasons for Believing That Nuclear Depth Psychology Will Remain Policy Irrelevant

There are two conceivable sorts of tactics that might be used to try to implement the strategy of deep psychological transformation of the superpower relationship. According to the *bottom-up* approach, one would first concentrate on revolutionizing the thinking of ordinary people in the Western democracies, especially the United States. The wished-for scenario might unfold as follows: As increasing, and increasingly vocal, numbers of citizens are made aware of the lemming-like trajectory of the nuclear arms race, their concerns will eventually be heard and appreciated by elected officials, who will also thenceforth begin to think in the new manner. Following this, the nuclear war planners in the Pentagon and elsewhere will gradually be forced into the new mold. The transformative process would then conclude when the declaratory nuclear policies of the United States begin to reflect this new way of thinking—for example, in a declaration of a freeze—and this, in turn, would begin to shape the nuclear policies and behavior of the Soviet leadership. Those who would favor a bottom-up "cure" for superpower psychopathology believe, therefore, that what they take to be suicidal inertia at the highest levels of the U.S. government can eventually be undermined by citizens who have become mobilized by their terror in the face of what seems to them to be an increasingly probable nuclear holocaust (e.g., Gitlin, 1984; Lifton & Falk, 1982).

Unfortunately for advocates of the bottom-up approach, there is no evidence that periodic upswings in public interest in nuclear issues are at all related to developments in U.S.-Soviet nuclear arms competition. One can trace a steady line of evolution in American strategic thinking—from massive retaliation, to flexible response, to limited options, to countervailing, to "prevailing" in a limited nuclear war. There is no question that this evolution is related to technological innovation and to the requirements of military doctrine. But it appears completely unrelated to the vicissitudes of public opinion on nuclear matters (Betts, 1984). Indeed, we seem presently to be witnessing the precipitous demise of the Freeze movement, begun only a few years ago, without anything like a partial freeze anywhere in sight (Klare, 1985). Of course, the past and present are not necessarily prologue. Some sort of bottom-up psychological transformation thus always remains possible. But based on its past failures, one ought to regard the probability of some such transformation as extremely low.

The alternative view of the psychological transformation of the superpower relationship is that it must occur from the *top-down*. The imagined scenario might unfold roughly as follows: For whatever reason, an American president makes an unprecedentedly bold move to halt

the arms race, for example, by announcing the intention to make deep cuts in the American arsenal and/or to cancel deployment of certain systems regarded by the Soviets as suitable for a disarming first strike against them. The president then takes the proposals to the Soviet counterpart, who agrees to reciprocate. Faced with a nuclear fait accompli deriving from a historic summit meeting, the NATO allies and the American public and Congress, all notoriously fickle in matters of nuclear policy, agree to the radical change of course. In this scenario, therefore, the manner of thinking is altered by a radical action taken by the top leadership, which results eventually in a widely shared new way of thinking about superpower relations. Deutsch typifies advocates of the top-down tactic. In his view, the malignant social process could be completely transformed if only "a bold and courageous American leadership would take a risk for peace . . . [and] announce its determination to end the crazy arms race." If only a president would take charge, says Deutsch (1983), "we could replace the arms race with a peace race" (p. 23).

But is it really true that even an extraordinarily bold move by an American president to seize an opportune moment is likely to initiate a chain reaction of political, military, and psychological events that results ultimately in the transcendence of the arms race and, eventually, a top-down cure for superpower psychopathology? There are no historical reasons for optimism on this question. For we are highly unlikely to experience in the foreseeable future anything like the peculiar circumstances that combined, during the late spring and summer of 1963, to produce the most opportune such moment so far in the nuclear age. During those few brief but eventful months, the American leader, together with his Soviet counterpart, did indeed labor mightily to accomplish what Mack (1985b) has called "a transformation in the quality of the Soviet-American relationship" (p. 53). And although some notable accomplishments marked these months, it is obvious, after nearly a quarter of a century, that they led to no fundamental changes in the superpower relationship. It is very far from obvious, therefore, why we should expect any top-down cure of the superpower relationship in the future.

Let us review just a few of the salient facts in this limiting historical test case for the top-down cure. The first two years of John Kennedy's presidency constituted a crash course in nuclear learning for both him and Nikita Khrushchev, a course consisting mainly in a series of episodes that were almost wholly unprecedented in intensity and danger. In early 1961, a military clash between Soviet-supplied and Soviet-advised forces and their American-led counterparts was narrowly averted in Southeast Asia. In October 1961, American and Soviet tanks, poised to open fire, faced each other at point-blank range on either side of the newly constructed Berlin Wall. Ultimately and fortunately, neither side fired and the crisis abated. Finally, during the Cuban missile crisis of October 1962, the superpowers came closer to a shooting war, thus closer to nuclear war, than at any time before or since. The avail-

able evidence suggests that the leaders of the superpowers were profoundly affected by these events, especially by the missile crisis. Khrushchev, whose bellicosity and belligerence was by this time legendary, began to speak and act in a far more conciliatory manner than before. President Kennedy, the cold warrior, began to seek accommodation with his adversary. The moment seemed ripe for fundamental change.

The two leaders attempted to seize that moment dramatically. In a commencement address at the American University on June 10, 1963, President Kennedy (1963/1985b) announced that discussions were underway in Moscow to work out the details of an agreement that would eliminate atmospheric testing of nuclear weapons by the United States, the Soviet Union, and Great Britain. He further announced that the United States would henceforth forgo atmospheric testing unilaterally, so long as the other nuclear powers also refrained from doing so. The Soviets reciprocated. Moreover, for the first time in memory they opened their airwaves to Western broadcasts by permitting the entire text of Kennedy's speech to be broadcast, in Russian and unjammed, throughout the Soviet Union. In the weeks that followed, they ceased altogether jamming broadcasts in the Russian language, no matter what the subject or content (Sorensen, 1965, p. 733). Finally, during a speech in East Berlin on July 2, Khrushchev endorsed the atmospheric test ban. The Limited Test Ban Treaty was signed on August 5 and ratified by the American Senate on September 24 by a vote of 80 to 19.

It is worthwhile to pause briefly to consider just how unexpected and remarkable this turnaround in U.S.-Soviet relations seemed at the time and how remarkably close it comes to fulfilling the spirit and letter of the requirements laid down by nuclear depth psychologists for initiating a cure for superpower psychopathology. Mack (1985b), for example, emphasized as a prerequisite to fundamental change "the acknowledgement of Soviet-American interconnectedness" (p. 53). Deutsch (1983) urged the American leadership to take steps to "replace the arms race with a peace race" (p. 23). Here is how President Kennedy expressed these ideas in his American University address—in characteristically high-flying Kennedy rhetoric, to be sure, but rhetoric that, coming on the heels of the dangerous crises of 1961 and 1962, seemed (and seems) highly appropriate:

If we cannot now end our differences, at least we can help make the world safe for diversity. For, in the final analysis our most basic common link is the fact that we all inhabit this planet. We all breathe the same air. We all cherish our children's future. And we are all mortal . . . confident and unafraid, we labor on—not toward a strategy of annihilation, but toward a strategy of peace. (Kennedy, 1963/1985b, pp. 462, 464)

On July 26, in a televised address to the nation, he introduced the atmospheric test-ban treaty, arguing that "the achievement . . . is not a victory for one side—it is a victory for mankind" (Kennedy, 1963/1985c, p. 602). And so it was.

Yet compared to the cure for superpower psychopathology, and its exemplification in an arms race held by nuclear depth psychologists to be suicidal, the Limited Test Ban Treaty was a very small achievement indeed, perhaps nothing more than a brief stay of the coming global execution. For despite the earnestness of the two leaders, each driven powerfully by the fear of yet another terrifying nuclear crisis, they came nowhere near to changing the quality of the superpower relationship. It was then, and still remains, basically competitive, often hostile, with the maneuvering of each side kept in check to a great extent by fear of initiating a series of events that might bring on a crisis leading to a nuclear holocaust. The number of nuclear warheads in each arsenal is vastly larger than in 1963, and the means of delivering them continue to grow faster and far more accurate than ever before. These are well-known facts. But these facts indicate that the sort of top-down cure for superpower psychopathology sought by the nuclear depth psychologists has, at best, no precedent and is, at worst, an earnest but monumentally improbable wish.

President Kennedy said on July 26, 1963, that the Limited Test Ban Treaty was but the first step in a figurative journey of a thousand miles (Kennedy, 1963/1985c, p. 606). The course of U.S.-Soviet relations since then suggests that for every such step forward on the course favored by the nuclear depth psychologists, we seem to have taken at least one step backward. We still have 1,000 miles to go, more or less, and this illustrates just how unpromising the depth psychological approach is for reducing the risk of nuclear war. Because even if the nuclear depth psychologists' fundamental analogy—that the superpowers are partners in a psychopathological relationship—is regarded as valid (which is, of course, debatable), the patients seem destined to retain their "illness" even, as the events of 1961-1963 show dramatically, under conditions that seem optimal for the beginnings of a cure.

Conceptual Reasons for Believing That Nuclear Depth Psychology Will Remain Policy Irrelevant

The Ubiquity of Conflicting Values

Why should this be so? Why have the "patients" seemed to be so incorrigibly psychopathological? The answer, I believe, lies in the nuclear depth psychologists' having overlooked the inadequacy of that part of the analogy between clinical pathology and the arms race that concerns "cure." Stanley Hoffman (1986) made the point that "even if one accepts the metaphors of collective disease or pathology, one must understand that the 'cure' can only be provided by politics" (p. 10).

This fact has significant implications. In the anarchic world of international affairs, there exists nothing remotely resembling the atmosphere of control, safety, good intentions, and the powerfully felt need to be cured that one customarily associates with the clinical consulting room. There is no therapist. Few, if any, "patients" present themselves as candidates to be cured. Instead, one finds

in international affairs, especially in those aspects that are believed directly to affect national security, conditions far more analogous to gang warfare than to clinical psychology or psychiatry (Schelling, 1966, p. 135). Actors and organizations armed to the teeth seek constantly to aggrandize, or at least to maintain, their political positions and access to scarce resources by peaceful coercion if possible or, if not, often by violent means. These are certainly not pleasant facts, but they are facts nonetheless. They imply that, just as one could not plausibly expect depth psychologists to be of much assistance in preventing warfare between, say, two rival underworld factions, one should likewise not expect them to provide any significant assistance in ongoing efforts to avoid a nuclear war between the superpowers. A psychologist (or anyone) interfering with gangland activities automatically becomes a candidate for murder; psychologists seeking to intervene in what they take to be superpower madness are merely ignored by policymakers in both countries. The central point is this: Although the risk of nuclear war may be conceptualized as primarily a problem of depth psychology, this way of framing the problem seems unrelated to the reality that nuclear policymakers believe they face.

Should we expect this to change? Is it likely that those with responsibility for managing nuclear risks will soon, or ever, give into what Henry Kissinger recently called the "profound American temptation to believe that foreign policy is a subdivision of psychiatry" (Kissinger, quoted in "Commencement," 1985, pp. 68-69)? Stanley Hoffmann has suggested two overarching reasons why we would be unwise to expect such a transformation in our leaders now or in the foreseeable future. First, according to Hoffmann, the continuing effort to maintain a credible nuclear deterrent threat, which nuclear depth psychologists call the arms race, is not simply, or even mainly, the result of mutual misunderstanding between the leaders of the superpowers. Quite the opposite, in fact. For example, perhaps the most important reasons American leaders of any post-World War II administration would give for maintaining deterrence is that they have understood the nature and intentions of the Soviet state and they abhor them. This, according to Hoffmann (1986), "reflects[s] the conviction that one's country has interests that are not mere figments of the imagination, and need to be protected both because of the material costs of losing them, and because of the values embedded in them" (p. 10).

Consider the example of President Kennedy's actions during the Cuban missile crisis. On October 22, 1962, he announced in a televised address that the island of Cuba would be "quarantined" by the U.S. Navy until the Soviets agreed to withdraw the newly discovered missiles they had placed there (Kennedy, 1962/1985a). Make no mistake: The President consciously and forcefully, although with tremendous apprehension, took an action that probably raised the risk of nuclear war in the short run. He did so for two reasons, each of which exemplified Hoffmann's point about the centrality of deeply conflicting values. First, he believed that by raising nuclear risks

in the short run—by taking a firm stand on removal of the Cuban missiles—he would lower even greater nuclear risks over the long run by discouraging the Soviets from embarking on yet other crisis-ridden adventures, perhaps in even more dangerous contexts such as Berlin (see Carnesale et al., 1983, pp. 15-17). Second, he believed, probably correctly, that the admittedly dangerous quarantine of Cuba was the least risky action open to him. Many of his key advisers, most of the influential congressmen and, ultimately, most American citizens (had they been consulted) would probably have preferred to bomb the missile sites, invade Cuba, and overthrow Fidel Castro. The President himself at first favored these options (Trachtenberg, 1985a).

One may regret the pervasiveness of the belief that Soviet and American values are so fundamentally and unbridgeably at odds that the American people may require their elected officials to, in effect, raise the risk of nuclear war significantly in order to preserve what they regard as the nonnegotiable distinction between the Soviet and the American way of life. One may regret it, but one aspiring to realism in matters of nuclear policy cannot deny it—precisely because no American president can deny it—and nuclear decision making is a presidential prerogative par excellence.

The Persistence of Ambiguity in Combating Nuclear Risks

But this does not mean, of course, that we should expect the leaders of the superpowers, and their respective fellow citizens, to be devoid of substantial appreciation for the one value we all share unequivocally: the desire to avoid a catastrophic nuclear war. Yet within our present situation, circumscribed by what appear to be two irreconcilably hostile superpowers, there exists no action or cluster of actions that will lead unequivocally to a lessening of nuclear risks. This is Hoffmann's second argument against the probability of radical change leading to qualitatively lower risk of nuclear war. He called his principle "the ambiguity of life in a nuclear world" (Hoffmann, 1986, p. 11). Although we all value survival, we are unsure how to guarantee it or even of how to raise its likelihood significantly. Hoffmann mentioned one example that ought to be especially poignant to nuclear depth psychologists in search of a cure for the "insane" arms race and the superpower psychopathology they believe underlies it. It is this: What is called the "arms race" may have resulted in a level of nuclear risk that is lower than might otherwise have been the case. As Hoffmann pointed out, "The much lamented redundancy of weapons, a calamity if nuclear deterrence fails, can also be a cushion against failure" (Hoffmann, 1986, p. 11). Thus the choice—often proffered by nuclear depth psychologists as fundamental—between a very risky arms race and a much less risky freeze, or even deep cuts in the arsenals, may be chimerical. Actual choices may be between highly ambiguous alternatives: say, an uncertainly risky arms buildup and whatever we may regard as its uncertainly risky alternatives.

Can the ambiguity of political decision making in a nuclear world be abolished or at least reduced significantly? What would have to happen before leaders of both superpowers might see their way clear to agreement on what must be done unequivocally to reduce the risk of nuclear war? Suppose we try to imagine a scenario in which some such agreement is forthcoming. Probably the single event most likely to produce such unaccustomed clarity of thinking about nuclear policy is a limited nuclear war, one that ends before becoming the ultimate catastrophe but after both leaderships have become thoroughly mortified by the results—say, between several hundred thousand and several million deaths occurring in a matter of hours. The strategist Herman Kahn (1962) imagined such a scene in his book *Thinking About the Unthinkable*: A limited nuclear war has just concluded; an American president grabs the first book on world government he can find on his shelf, uses it as the basis for a hastily constructed disarmament plan, and sends the plan to the Soviet leader with the plea to sign it “now, before the dead are buried . . . because within weeks both of us will be trying to exploit our common danger for unilateral advantages” (Kahn, 1962, pp. 148–149). Perhaps for a few days following a nuclear war that is “limited” only in relation to the total catastrophe that is possible, the nuclear world might conceivably relinquish its frustrating and often frightening ambiguity.

But let us further suppose that we regard this as too high a price to pay for clarity, either because we do not believe a nuclear war is likely to remain limited or simply because it is for us (if not for Herman Kahn) unthinkable that we should trade so many lives for the uncertain prospect of a postwar healing of the superpower relationship. What sort of event would we then imagine to be the prerequisite to a qualitative increment in nuclear clarity? I think we might wish for an event very much like the Cuban missile crisis, an event during which only one person was killed (an American U2 pilot, shot down over Cuba on October 27) but which also appears to have terrified many key members of the leaderships of each superpower, as indeed it terrified the entire world in late October 1962. Samuel Johnson once remarked that the prospect of death wonderfully concentrates the mind, and the prospect of death on an unprecedented scale seems indeed to have riveted the attention of Kennedy and Khrushchev on the need for fundamental change. The “hot-line” was thus instituted, and the Limited Test Ban Treaty went into effect. As noted above, the rhetoric and actions of both leaders following the missile crisis were remarkably hopeful, although this momentum could not be sustained by their successors.

The reasons for the ultimately superficial moves toward postcrisis risk reduction (at least when compared to what would be required by nuclear depth psychologists) must be related to the essential ambiguity of the meaning of the missile crisis itself, or any such temporarily clarifying, intense superpower confrontation. For although it is undoubtedly true that minds in high places were wonderfully concentrated by the events of October 1962, a

single shared revelation was not forthcoming. Far from it, in fact. True, Kennedy and Khrushchev joined the whole world in perceiving a moment ripe for an imaginative step toward a more peaceful relationship between the superpowers. Yet simultaneously, another part of Khrushchev's mind, and of the collective mind of the Soviet leadership, focused intensely on what they regarded as their humiliation over the Cuban missile withdrawal. This feeling of defeat, and the determination never to have it repeated, is epitomized in a remark made shortly after the missile crisis by Soviet Deputy Foreign Minister Vasily Kuznetsov to the American arms control negotiator John McCloy. “You Americans,” said Kuznetsov, “will never be able to do this to us again” (Bohlen, 1973, pp. 495–496). In other words, Kuznetsov believed that the Soviets had in fact “lost,” that their defeat derived mainly from their nuclear inferiority, and that the Soviets would do whatever was necessary to achieve numerical strategic parity as soon as possible.

Thus the Cuban missile crisis, the event in the nuclear age that seems to have led to the most significant attempts to begin to heal the superpower relationship was also, very probably, one of the most significant spurs to what the nuclear depth psychologists refer to as the suicidal arms race (Richard M. Nixon, interviewed in Rosenblatt, 1985; cf. Trachtenberg, 1985a). Looked at from the perspective of the depth psychologists, the crisis that was one of the greatest forces for good, sanity, and safety was also one of the greatest instigators of evil, psychopathology, and increased risk of potential catastrophe. This, in short, is total ambiguity. The paradoxical conclusions derived from a depth psychological examination of the significance of the missile crisis illustrate in yet another way why we should not expect the radical sort of transformation sought by nuclear depth psychologists to be forthcoming.

The Empirical Mistake of Nuclear Depth Psychology: Taking Einstein Too Seriously

Why do nuclear depth psychologists cling to an analogy that is so demonstrably irrelevant to the construction and execution of nuclear policy? Why do they continue to frame the problem of reducing the risk of nuclear war in terms of psychosis, madness, and malignancy? The short answer, I believe, is that they have taken Einstein far too seriously. The physicist, it may be recalled, put the problem of nuclear risk reduction in wholly psychological terms. “The unleashed power of the atom,” he contended, “has changed everything except our modes of thinking, and thus we drift toward unparalleled catastrophe . . . a new type of thinking is essential if mankind is to survive” (Einstein, quoted in Holt, 1984, pp. 199–200). This has come to be regarded by advocates of nuclear depth psychology as a manifesto, a call to action, and a self-evident justification for approaching the risk of nuclear war as a psychological problem evident in an arms race and undergirded by a psychopathological superpower relationship. Operating within this psychological formulation of the problem of nuclear risk, many recent attempts have

been made to meet Einstein's challenge by elaborating ways of thinking about the superpower relationship and the arms race that are more systemic (Holt, 1984), more mature (Mack, 1985a, 1985b), less malignant (Deutsch, 1983), and so on. If only we could learn to think differently about the superpower relationship, the Einsteinians all contend in their various ways, we could turn the nuclear arms race around and build a safer world.

The central, salient assumption of all nuclear depth psychologists is that our "thinking" may be regarded as a kind of independent variable (or cause), whereas risk of nuclear war, evidenced in a spiraling arms race, is the dependent variable (or effect). This formulation, consistent with, and in many instances derived from, Einstein's manifesto, is radically different from the way nuclear policymakers tend to approach the problem. The policymaker is inclined to regard risk of nuclear war as both a cause and an effect: a cause of the manner of piecemeal, cautious thinking required to manage international affairs, and an effect of deeply rooted, hardly understood factors that operate to maintain the quasi-anarchic nation-state system. The functional result of this discrepancy is that the main causal arrow for each group is nearly the reverse of what the other takes it to be. Nuclear depth psychologists seek to alter our thinking, *thus* altering a particular international relationship and lowering nuclear risks. Policymakers, on the other hand, see their main task as managing nuclear risks within the context of an essentially unalterable international situation that determines the form, if not all of the content, of our manner of thinking.

An obvious, if superficial, conclusion to be drawn from these considerations is that nuclear depth psychologists and nuclear policymakers see the problem of nuclear risk very differently, in fact almost inversely. This is no doubt why members of the policy community have, by and large, concluded that the arguments of the depth psychologists are irrelevant to the management of nuclear risks (Klineberg, 1984, p. 1248). But a closer examination of the psychological assumptions underlying each approach reveals the reasons not only why the formulations and prescriptions of nuclear depth psychology *seem* strange and irrelevant to policy makers but also why they really *are* irrelevant and are likely to remain so. In taking such a closer look we may get a clearer picture of why the policymakers' formulation accounts for the historical record whereas the clinical diagnosis and prescriptions of the depth psychologists do not.

Einstein asserted on many occasions that with the advent of nuclear weapons, all had changed except our thinking. What he seems to have meant by this is that the qualitative advance in our ability to destroy each other requires a concomitantly qualitative advance in the way we think about making and threatening war. Specifically, Einstein became an advocate of world government, one that could effectively outlaw war (Einstein & Freud, 1933/1966, pp. 199-200). We need, in Einstein's view, to learn to think peacefully and globally.

We have not done so, of course. The fundamental

reason for this, I believe, is not because we have not tried hard enough, or been clever enough, or because an insufficient number of depth psychologists have gotten involved to show us the way. Rather, it is simply because Einstein's cardinal assumption, one that has been taken up with a vengeance by his psychological followers, is wrong. Everything has *not* changed except our thinking. Significantly, the two most important determinants of our thinking about international security have not changed at all: namely, the biological drives that we inherit from our distant evolutionary ancestors and the relevant social structures contained in the nation-state system that we inherit from our recent human ancestors and that have evolved very largely to soften the impact of the aggressiveness and destructiveness inherent in our biology (Fromm, 1973). In short, it is just not tenable to hold that our "thinking" about so basic a question as our collective security simply floats about, like some Cartesian cognitive substance, independent of our biology and culture and radically alterable via willpower. There is simply no longer any doubt that the *form* of our thinking is deeply embedded in organic structures and processes and that the *content* of our thinking is almost wholly dependent on our cultural and institutional contexts (Campbell, 1975; Lee & Devore, 1976; Popper & Eccles, 1977; Wilson, 1975). In short, there are deep-seated adaptive reasons why we think as we do, and these are highly resistant to change.

This is hardly the place to re-argue the nature-nurture controversy or to debate the reality and extent of the freedom of the will. Yet perhaps it may be useful to illustrate something of what the nuclear depth psychologists have omitted in their Einsteinian enthusiasm and the way in which these omissions are connected with the nuclear depth psychologists' ahistorical optimism. No one has epitomized the biological dimension better than William James. Writing partly in disgust, partly to analyze, in the aftermath of the Spanish-American War, James said this in 1909:

History is a bath of blood. . . . Such was the gory nurse that trained societies to cohesiveness. We inherit the warlike type. . . . Dead men tell no tales, and if there were any tribes of other type than this they have left no survivors. Our ancestors have bred pugnacity into our bone and marrow, and thousands of years of peace won't breed it out of us. (James, 1909/1977b, pp. 661-662)

It is relatively unimportant that James, a hard-core Darwinian, exaggerated slightly. We now know there are a few societies that appear to be relatively (though very far from completely) pacific (Lee & DeVore, 1976), but they are few in number and becoming fewer all the time. James found in Thucydides ample proof that there must be a hard core of inherited, unalterable aggressiveness down deep in all of us, a core consistent now, as then, with the proposition attributed by Thucydides to the Athenians: "The powerful exact what they can and the weak grant what they must" (James, 1909/1977b, pp. 661-662).

Hoffmann agreed. "The student of present day world

politics who turns to Thucydides," according to Hoffmann, "will find that although the music may be different, the choreography hasn't changed" (Hoffmann, 1986, p. 2). The two central reasons why this should be so were given by another psychologist who, like James, found himself in a mood for meditation on war. Just after the outbreak of World War I, Sigmund Freud believed he could see more clearly than ever how "war . . . strips us of the later accretions of civilization and lays bare the primal man in each of us" (Freud, 1915/1966, p. 299). This, of course, was the Freud who was so famous and controversial, the psychologist who unveiled the latent "animal" in us all.

But Freud was also remarkably sensitive to the cultural constraints on our thinking. Thus, as he pointed out, "War cannot be abolished, so long as the conditions of existence among nations are so different, and their repulsions so violent, there are bound to be wars" (Freud, 1915/1966, p. 299). Freud, in fact, honestly admitted that even he, an avowed rationalist, an immigrant Jew from Silesia, and therefore a second-class citizen of Vienna and of Austria, was pulling hard for the victorious vindication of German-speaking peoples in the Great War. The pull of the nation-state is, as Freud discovered for himself in 1914, very strong indeed.

The point is that, *contra* Einstein and his followers, none of this has changed. Thucydides is still entirely relevant—to deterrence of nuclear war and to affairs of international security generally. The more we learn about our mammalian ancestors, the less optimistic we ought to become about somehow expunging human aggression (Eimerl & DeVore, 1965). And the bulwark of our contemporary international security regime, the sovereign nation-state, shows no sign of dissolving into a pacific world federation. Thus, so far as the key categories of the determinants of our relevant thinking are concerned—our biology and our international institutions—little or nothing has changed. This, then, is why our thinking about international security has not changed in a manner anywhere near to that required by Einstein, and this is also why, finally, there is no reason for optimism regarding the Einsteinian aspirations of the nuclear depth psychologists.

The Psychological Imperatives: Preventing, Managing, and Learning From Nuclear Crises

What, then, is to be done by those who seek a policy-relevant psychology of avoiding nuclear war? The answer is both obvious and bound to meet with resistance from nuclear depth psychologists: Psychologists should turn their attention to *crises*—concatenations of political and military miscalculation and misperception that may, despite the initial intentions of all participating major decision makers, spiral out of control and into a nuclear war. The reason for this is straightforward: Such crises are the clusters of events most feared and least well understood by the people who conceive, procure, deploy, and possess the authority to use nuclear weapons. Among the members of those groups, there is practically no dis-

sent from the paradigmatic view expressed recently by Robert W. Tucker. According to Tucker (1984), "It is . . . only in periods of severe crisis that the effects of the arms race are properly seen as critical." What is thus most to be feared and avoided, in Tucker's view, is "a political process out of which the conviction increasingly grows that war is inevitable" (Tucker, 1984, pp. 6-7; see also Allison, Carnesale, & Nye, 1985; George, 1984a). We ought therefore to conceptualize our problem by beginning with the (hypothetical) psychological "war-is-inevitable" point (Betts, 1985, p. 59) and work our way backward, searching for techniques that might help decision makers manage, and ultimately prevent, crises in which the superpowers come head-to-head, as they did in October 1962.

To most nuclear depth psychologists, the injunction to turn their attention to nuclear crises will probably seem perverse—a strategy of too little, too late that, when the nuclear chips are down next time (or the time after that, etc.), is bound to fail, following which the world will be destroyed. Mack (personal communication, January 14, 1985) has proposed an analogy with which he illustrates his reasons for believing that single-minded psychological attention to nuclear issues is misguided (which I summarize as follows):

Trying to avoid a nuclear war by studying nuclear crises would be like spending all my time with a new intern teaching him what to do if a patient ever pulls a loaded gun during a therapy session and tries to kill him. It is true that if such an event were to occur, the therapist will be well-served if he had thought ahead of time about how best to respond. But the event has a very low probability of occurring and if it does occur, it is highly probable that the patient will in fact shoot the therapist anyway. In any case, it is far better to focus the intern on working to create a context in which healing can occur. For if this is successful, the question of how to manage the crisis—to keep from being shot—will not arise.

Thus, according to Mack, who speaks in this telling analogy for many depth psychologists, one ought to focus attention on the superpower relational pathology, as it is reflected in the arms race, rather than on precipitating crises. The logic is simple and, to nuclear depth psychologists, self-evident: Heal the pathological superpower relationship, end the arms race, eliminate nuclear weapons, and nuclear crises (and nuclear war) become impossible.

The trouble with this analogy is that it is utterly false. Managing the superpower relationship within the context of international affairs has virtually nothing in common with psychotherapy. Better analogies would be those of gang warfare (referred to earlier) or a tag-team wrestling match, but one in which the member of each team who stands outside the ropes, waiting a turn, has a loaded gun trained on both the action in the ring and on the other gunslinger. The two wielding the guns deter one another as the two in the ring jockey for position and advantage. Of course, neither one in the ring will want to try to push the adversary too far, for fear of causing the opponent to take desperate action that might trans-

form the competitive match into a winnerless slaughter. One can imagine such a match occurring in which those standing outside the ropes have their guns in holsters or even, if the contestants have given careful consideration to the requirements of crisis prevention and management, back in their respective locker rooms. In the latter situation, risk of the match being transformed into a slaughter would probably be reduced considerably. But the match would continue, and no one—neither contestants nor spectators—ought to confuse the proceedings with a psychotherapy session.

It is probable that nuclear depth psychologists have been driven to ignore the obviousness of the disanalogy between psychotherapy and U.S.-Soviet relations, and thus to disdain the study of nuclear crises, by their conviction that runaway technology—epitomized in an arms race—has become almost completely autonomous, beyond the control of anyone. As weapons become more numerous, accurate, and fast, the depth psychologists see risk of nuclear war rising concomitantly. Thus, they may come to believe that work on the management, prevention, and understanding of crises is bound to be hopelessly impotent in any attempt to stave off nuclear war. It is widely believed, for example, that with present and anticipated nuclear and conventional capabilities, the next superpower showdown will *necessarily* have a far different, far worse outcome than that of October 1962.

The fallacy in this argument lies in its assumption that the leaders of the superpowers, knowing all these facts about the enhanced capabilities of their weapons, will fail to take this information into account as they calculate their moves and countermoves. In other words, the assumption is that virtually nothing can be done to prevent our leaders from acting as if it were 1962, rather than the present. But this is demonstrably untrue. To take only two recent examples, consider the Reagan Administration's responses to the killing of an American serviceman in East Germany in the spring of 1985 or, even more telling, the Soviets shooting down a Korean Air Lines jet carrying many Americans in the summer of 1983. The responses of the Reagan Administration, arguably one of the most verbally bellicose toward the Soviet Union in a generation, were muted and highly restrained. It seems clear that even in the midst of—in fact, largely because of—the arms race so much feared and attacked by the nuclear depth psychologists, the leaders of the superpowers have learned to be far more prudent than before. They have, in the apt phrasing of Tucker (1984), learned "to adjust the definition of the nuclear threshold to the conditions that determine it" (p. 7).

But this fact should give no cause to gloat, no occasion for foolish optimism. The nuclear arsenals are enormous and probably entirely too usable. International politics remains volatile and unpredictable. The lessons for psychologists seeking to contribute to reducing the risk of nuclear war are therefore not to stop worrying about it, but rather to begin worrying about it in potentially policy-relevant ways, focusing on crises, and also to realize that this is not necessarily the doomed enterprise

it may seem to be when viewed as an analogue to psychotherapy. Our leaders have learned a great deal about avoiding nuclear war—especially about the prevention and management of superpower crises. These high-stakes "gangsters" or "wrestlers" have kept their nuclear guns securely holstered almost continuously since October 1962, when, as presidential aide Theodore Sorensen recalled, President Kennedy, Chairman Khrushchev, and much of the world stared directly down the "gun barrel of nuclear war" (Sorensen, 1965, p. 724).

They have learned, but much of their learning has been tacit, makeshift, and thus too largely unremembered and misunderstood. There is therefore a great deal of important work that needs to be done on practical problems of *crisis management* (see Allison et al., 1985; George, 1984a, 1984b; Ury, 1985) and on conceptual issues relating to *crisis prevention* (Blight, 1985b; in press-a; in press-b; George, 1984a, 1984b; Hart, 1984; McCaughrean, 1984).

But without doubt the critical need—one whose problems virtually invite the participation of psychologists—is for a far better understanding of *crisis learning*. We need to begin to understand, in far greater detail and much more systematically than heretofore, the process by which our decision makers have made sense of their efforts to prevent and manage nuclear crises. The key question is: How did they interpret events that, if mismanaged, might have (but did not) lead to nuclear war? Comparative historical analyses are a good place to start (George & Smoke, 1974; Lebow, 1981), but to psychologists they will seem rather abstract, deductive, and lacking in the raw immediacy that many psychologists believe lends credibility to generalizations about human behavior. Policymakers can definitely use psychological assistance in transforming rough-hewn, prudent practices into more fully formed rules of the nuclear road, rules that might be passed on in a credible and intelligible form to succeeding leaderships.

The Psychological Orientation: Back to William James, Back to the Cuban Missile Crisis

It must be emphasized that even those psychologists and psychiatrists who rightly reject the utility of the analogy between the nuclear arms competition and psychopathology, and who turn instead to the study of precipitating crises, will find the task of contributing to reducing the risk of nuclear war a very difficult and uncertain enterprise. The central reason for this is all too familiar to psychologists: The behavioral sciences are "soft," lacking in firmly established laws and unequivocal predictions. Thus we tend to lack anything approaching the sometimes extravagant credibility accorded, say, to physical scientists when they speak and write about ways of reducing the risk of nuclear war. This relative deficiency in the credibility of the behavioral sciences, particularly with regard to matters of nuclear war and peace, is quite unlikely to change in the foreseeable future.

But to psychological researchers intent on actually

reducing the risk of nuclear war, this problem will be exaggerated, probably to an unprecedented extent. Putting the problem in its starkest form, in order to have an impact on the risk of a major nuclear war, one must somehow participate in a process of influencing the ways in which the American president and the Soviet chairman make decisions that may interact in ways that drive upward the probability of the occurrence and/or mismanagement of a deep crisis between the superpowers. The task is daunting, to say the least. The problems to be investigated are maddeningly knotty and complex, and the reputation of psychology in the nuclear policy community, which is minimal at best, will hardly help to bring influence to bear in high places, no matter how highly any given finding or suggestion may be regarded within the psychological community.

A highly regarded new effort in this direction has recently gotten underway via the collaboration of two distinguished scholars who have written extensively on international crises: Irving Janis, a psychologist now at Berkeley, and Richard Ned Lebow, a political scientist at Cornell. Their joint endeavor, which is projected to produce several books on the psychology of international crisis management, is of course much too new to yield a confident assessment of its chances for policy relevance. But news of the Janis-Lebow enterprise has already generated a good deal of enthusiasm and anticipation, especially among psychologists interested in nuclear policy. The widespread belief seems to be that because nuclear policymakers are preoccupied with crises, the psychological study of nuclear (and other) crises will automatically convey policy relevance.

There are at least two reasons, however, for doubting that this assumption is correct: First, a relatively minor but (one guesses) still difficult obstacle stands in the way of any meaningful collaboration between Janis and Lebow. Even a cursory reading of their main works (Janis, 1982; Lebow, 1981) will reveal immediately that, so to speak, Janis is the Dr. Pangloss and Lebow the Chicken Little of nuclear crisis management. Janis believes crisis management is viable; Lebow believes it is not. Janis, for example, believes that the central problem—stress, which leads to groupthink, or premature closure in decision making—*can* be significantly reduced and that it was, in fact, hardly present at all in President Kennedy's "EX-COMM" (an executive committee of the National Security Council), which managed the Cuban missile crisis (Janis, 1982, p. 157). Janis also seems to believe that nuclear policymakers may finally be ready to listen to psychologists (Janis, 1986, p. 384). But Lebow has long denied these contentions, holding instead that "the evidence of promotional leadership and groupthink in the Cuban case raises important doubts in this author's mind about the extent to which leaders are willing and able to take steps to overcome these decision-making pathologies" (Lebow, 1981, p. 303). Thus Lebow has recently characterized the whole enterprise of nuclear crisis management as an "illusion" (Lebow, *in press*), whereas Janis now refers to it as "a ray of hope" (Janis, 1986, p. 382).

It is obvious that fruitful collaboration between this believer and unbeliever in the efficacy of nuclear crisis management will require a radical adjustment in the long-held views of one or both. Presumably, it is Lebow, the naysayer, who must do most of the adjusting. He must first come to believe, with Janis, that nuclear crisis management is not necessarily illusory. But these are issues that, though difficult, are in principle subject to negotiation and compromise.

Yet ultimately it will probably be the main point of *agreement* between Janis and Lebow, rather than their differences, that will prevent them from articulating a policy-relevant psychology of nuclear crisis management. That point is this: Both Janis and Lebow believe that such an endeavor consists in the prevention of "defensive avoidance," "decisional stress," and other accompaniments of groupthink and related pathologies. The overarching goal of the enterprise has been stated by Janis (1982) in a marvelously evocative and optimistic phrase: "the transformation of effective policy-making from a haphazard art into a cumulative science" (p. 273). Or, a bit more formally, Janis (and perhaps Lebow, eventually) believes that many of the significant obstacles to nuclear crisis management are psychological, that most of these are related to the stress of making difficult, high-stakes, time-urgent decisions, and that the solution to the problem lies in bringing solid psychological research on such issues (such as Janis's own) to bear on crisis decision makers in the American foreign policy establishment.

Yet the approach of Janis (whether or not it is abetted by Lebow or others) cannot possibly succeed unless policymakers can be made to believe that which they currently regard as preposterous: that the problems of nuclear crisis decision making are largely psychological. It is true that nuclear policymakers are preoccupied by crises, but *not*, it must be emphasized, by the *psychology* of crises. They tend to regard crises as international episodes that, though perhaps more intense than normal, are still caused, managed, and evaluated on the basis of *interests*, not psychology. Janis, it appears, has committed the nuclear depth psychologists' fallacy with regard to crises, just as Osgood, Deutsch, and the others have done regarding the arms race and relational psychopathology.

Nuclear policymakers are likely to remain quite uninterested in any crisis management research oriented around the presence or absence of groupthink. Such a program of research is likely to be psychologically unreal to them. One may get a hint of why this is so by examining two short excerpts from the very first and the very last remarks made during the first day of meetings on October 16, 1962, called by President Kennedy to discuss the development of a plan for responding to the news that the Soviet Union had placed offensive nuclear missiles in Cuba (the recording was made secretly by order of the President):

Dean Rusk: I do think we have to set in motion a chain of events that will eliminate this [missile] base. I don't think we can sit still. (Trachtenberg, 1985a, p. 171)

George Ball: What happens beyond that? You go in there with a surprise attack. You put out all the missiles. This isn't the *end*. This is the *beginning*, I think. (Trachtenberg, 1985b, p. 194)

The Cuban missile crisis, to its most significant participants, was about competing national interests: the necessity to remove the missiles from Cuba and the necessity of avoiding a war, certainly a nuclear war, with the Soviet Union. This does not mean stress was absent in the decision making or that the policies enacted were optimal. It merely means that to every participant in the Cuban missile crisis, from the President down to ordinary American citizens, the crisis was *about* the conflict involved in trying to satisfy two conflicting, nonnegotiable interests. That is the way it looked in 1962, that is the way policymakers today understand that event and other crises, and that, for all we can tell, will be the way the next deep crisis will appear to the policymakers who must try to manage it. That is why any policy-relevant psychology of nuclear crisis management ought to start with the psychological reality of the policymakers—that is, with conflicting interests. We must, in other words, step into the policymakers' conceptual circle, not the other way around, if we are to aspire realistically to policy relevance in nuclear matters.

What is to be done, generally speaking, by psychological researchers seeking to help reduce the risk of nuclear war? For the conceptual answer, I return to William James, via George Miller. Many years ago, Miller, addressing the convened members of the American Psychological Association for the first time as their president, startled his audience by telling them that, with regard to the pressing problems of our society—poverty, racial discrimination, domestic violence, and matters of war and peace—they ought to try to "give psychology away" (see Miller, 1969, pp. 1072-1074). In using this phrase, Miller not only meant that psychologists should turn their professional attention to these problems, he also implied something much more radical: that they (and we) should begin the process of giving psychology away by giving up claims to *a priori* expertise. In beginning to formulate questions whose answers might truly be helpful to society, psychologists, in Miller's view, should turn initially away from their research traditions and literatures and toward the worlds of raw experience shaped by society's pressing problems: what it really *means* to be poor, victimized by racism and street violence, or trapped in a tragic war (see Miller & Buckhout, 1972). Thus, Miller suggested, it is the first duty of psychologists (although hardly the last, of course!) to describe as accurately as possible the raw experience of the problems they wish to help solve.

With Miller, I return to the fundamental proposition of William James with which I began: Avoid the psychologist's fallacy; avoid confusing the psychologist's reality with the psychological reality of the persons one wishes to understand; assume only, as James said in "The Stream of Thought," that "the first fact for us . . . psychologists is that thinking of some sort goes on" (James, 1890, Vol. 1, p. 224). I would argue that this means that, no matter what our psychological pedigree may be, if we

seek a policy-relevant psychology of avoiding nuclear war, we must begin *phenomenologically* (Blight, in press-a; in press-b). In those situations leading potentially to, and through, nuclear crises, we need to begin by getting as close as possible to the experiential facts regarding what is feared by decision makers in nuclear crises and what it is like to have such concerns in those situations (Wolffheim, 1984). We want, as James might have said, detailed psychological descriptions of what decision makers in these situations have *knowledge about* and also what it is like to be directly *acquainted* with such knowledge (James, 1890, Vol. 1, pp. 221-223). This is where we psychologists ought to begin if we seek to reduce the risk of nuclear war: where actual nuclear policymakers have begun, and must begin, when they try to manage nuclear risks.

For the empirical answer to the psychologists' question, What is to be done about risk of nuclear war?, we ought to return first to the Cuban missile crisis, the closest call ever to a major nuclear war, and try to get inside the thinking of its key participants. As an entry, we could hardly do better than to respond professionally to the invitation inadvertently issued to psychologists by former Secretary of State Dean Rusk. In a recent discussion, Rusk reflected on what he believes ought to be done to reduce the risk of nuclear war and, in so doing, he offers to psychologists the barest outline of a potentially very packed research agenda:

To me, the overwhelming lesson to be drawn from the Cuban missile crisis is that governments, particularly the governments of the two nuclear superpowers, must do their best to avoid such crises because they are so utterly dangerous. I have never met a demigod or a superman. I have seen a lot of ordinary human beings carrying major responsibilities, grappling with the circumstances in which they find themselves. But [these were all] human beings with feet of clay. And now that such terrible destruction is operationally possible, we must find ways to back off and not let such crises appear.

One small illustration of that: During the Cuban missile crisis, President Kennedy and his senior advisors were pretty cool and pretty calm throughout the entire exercise. But we sustained a crisis at a very high level of intensity for some thirteen days. How long can human beings sustain a crisis at that level before sleeplessness, weariness, fear of the unknown, suspicion and accident begin to play a role?

So I hope both Washington and Moscow learned that we must back away from such crises and not let them develop. I think it is true that after the Cuban missile crisis, both Washington and Moscow were somewhat more prudent than they were before the crisis occurred. But is this a lesson that is automatically transmitted from one generation of leaders to the next generation who appear on the scene in our major countries? I wish I could be sure of that. (Rusk, 1983, pp. 1-2)

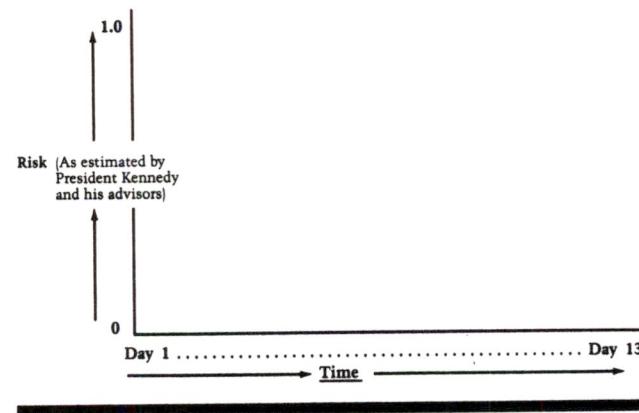
As a significant participant in the terrifying events of October 1962, Rusk is acutely aware that it was, and is, nowhere written that such perilous encounters will always be resolved peacefully. The reasons why the missile crisis *was* resolved without a war, Rusk suggests, need looking into from a psychological perspective. Personality, perception, cognition, even psychophysiology, and espe-

cially learning—these all veritably leap from Rusk's retrospective analysis as potentially important dimensions of any psychological efforts to look into the problems of nuclear crises to which he alluded and that he experienced first-hand. If we seek a policy-relevant psychology of avoiding nuclear war, we ought therefore to begin by helping Rusk, and all of us, become surer than anyone presently is that we will never again come as close to nuclear catastrophe as we did in October 1962.

Our aim should be to make a start toward the acquisition of this knowledge via the reconstruction of the 13 days of the missile crisis from inside the problem-solving perspective of the American President and his advisors, as they attempted to assess, balance, raise, and lower what they took to be their salient risks. Hour by hour, day by day, the President asked his advisors, and himself, "What are the sources of risk? How risky are they? What are the constituents of the risks? What are the options? What are the probable results to be expected from enacting the various options? How will the Soviets probably respond? What should we do in further response?" The relative psychopathology was not what the crisis was about. If we seek the construction of a policy-relevant psychology of avoiding nuclear war, we ought to try to get inside the evolving, relevant streams of thought of the President and his close associates as they thought, perceived, felt, and acted inside a crisis that most believed carried a substantial risk of nuclear war.

The task we should set for ourselves might be represented by a single, simple, empty graph like that in Figure 1. The goal, in a nutshell, is to plot two figurative "curves"—one representing the evolving, estimated risk of not getting the Soviet missiles removed from Cuba, the other representing the estimated risk of an inadvertent nuclear war—and to suggest reasons why the "curves" are shaped and related as they are. How specific and informative will we be able to get in this endeavor and in similar exercises? What invariants or patterns will suggest themselves? What lessons, both positive and negative, ought to be drawn? We do not know yet. But because the

Figure 1
The Research Agenda for a Policy-Relevant Psychological Inquiry Into the Cuban Missile Crisis



question is how to contribute psychologically to lowering the risk of the most likely sort of catastrophic nuclear war, and because the missile crisis is the capital case of this phenomenon, I believe this is where and how we should begin.

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